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NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	JUL 28	CA/Caplus patent coverage enhanced
NEWS	3	JUL 28	EFFULL enhanced with additional legal status information from the epline Register
NEWS	4	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS	5	JUL 28	STN Viewer performance improved
NEWS	6	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS	7	AUG 13	CA/Caplus enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS	8	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	9	AUG 15	Caplus currency for Korean patents enhanced
NEWS	10	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information
NEWS	11	SEP 18	Support for STN Express, Versions 6.01 and earlier, to be discontinued
NEWS	12	SEP 25	CA/Caplus current-awareness alert options enhanced to accommodate supplemental CAS indexing of exemplified prophetic substances
NEWS	13	SEP 26	WPIDS, WPINDEX, and WPIX coverage of Chinese and Korean patents enhanced
NEWS	14	SEP 29	IFICLS enhanced with new super search field
NEWS	15	SEP 29	EMBASE and EMBAL enhanced with new search and display fields
NEWS	16	SEP 30	CAS patent coverage enhanced to include exemplified prophetic substances identified in new Japanese-language patents
NEWS	17	OCT 07	EFFULL enhanced with full implementation of EPC2000
NEWS	18	OCT 07	Multiple databases enhanced for more flexible patent number searching
NEWS	19	OCT 22	Current-awareness alert (SDI) setup and editing enhanced
NEWS	20	OCT 22	WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT Applications
NEWS	21	OCT 24	CHEMLIST enhanced with intermediate list of pre-registered REACH substances
NEWS EXPRESS	JUNE 27 08	CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.	
NEWS HOURS		STN Operating Hours Plus Help Desk Availability	
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NEWS IPC8		For general information regarding STN implementation of IPC 8	

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FILE 'HOME' ENTERED AT 00:51:07 ON 04 NOV 2008

-> index bioscience medicine

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INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 00:51:52 ON 04 NOV 2008

71 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0* with SET DETAIL OFF.

=> s rna?(3w)dependen?(3w)rna?(3w)polymeras?

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16 FILE ADISINSIGHT
1 FILE ADISNEWS
426 FILE AGRICOLA
4 FILE AQUALINE
43 FILE AQUASCI
213 FILE BIOENG
2118 FILE BIOSIS
185 FILE BIOTECHABS
185 FILE BIOTECHDS
833 FILE BIOTECHNO
874 FILE CABA
3911 FILE CAPLUS
15 FILES SEARCHED...
6 FILE CEABA-VTB
3 FILE CIN
37 FILE CONFSCI
1 FILE CROPB
2 FILE CROPU
8 FILE DDFB
86 FILE DDFU
1775 FILE DGENE
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1556 FILE EMBASE

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1289 FILE ESBIODASE
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 35 FILES SEARCHED...
 3 FILE HEALSAFE
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 4 FILE OCEAN
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 4 FILE PHIN
 26 FILE PROMT
 322 FILE PROUSDDR
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 57 FILES SEARCHED...
 6 FILE SYNTHLINE
 764 FILE TOXCENTER
 515 FILE USGENE
 2225 FILE USPATFULL
 7 FILE USPATOLD
 368 FILE USPAT2
 1 FILE VETB
 2 FILE VETU
 4 FILE WATER
 267 FILE WPIDS
 2 FILE WPIFV
 267 FILE WPINDEX
 1 FILE NAPRALERT
 38 FILE NLDB

57 FILES HAVE ONE OR MORE ANSWERS, 71 FILES SEARCHED IN STNINDEX

L1 QUE RNA?(3W) DEPENDEN?(3W) RNA?(3W) POLYMERAS?

-> d rank

F1 7694 GENBANK
 F2 3911 CAPLUS
 F3 2225 USPATFULL
 F4 2118 BIOSIS
 F5 1827 MEDLINE
 F6 1775 DGENE
 F7 1748 SCISEARCH
 F8 1556 EMBASE
 F9 1489 LIFESCI
 F10 1289 ESBIODASE
 F11 874 CABA
 F12 833 BIOTECHNO
 F13 764 TOXCENTER
 F14 620 PASCAL
 F15 515 USGENE
 F16 494 IFIPAT
 F17 426 AGRICOLA
 F18 368 USPAT2
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 F21 267 WPINDEX
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F26	147	PHAR
F27	111	DRUGU
F28	86	DDFU
F29	43	AQUASCI
F30	38	NLDB
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F32	26	PROMT
F33	22	EMBAL
F34	16	ADISINSIGHT
F35	11	FSTA
F36	11	IMSDRUGNEWS
F37	10	IMSRESEARCH
F38	8	DDFB
F39	8	DRUGB
F40	7	NTIS
F41	7	USPATOLD
F42	6	CEABA-VTB
F43	6	SYNTHLINE
F44	4	AQUALINE
F45	4	OCEAN
F46	4	PHIN
F47	4	WATER
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F49	3	HEALSAFE
F50	2	CROPU
F51	2	FROSTI
F52	2	VETU
F53	2	WPIFV
F54	1	ADISNEWS
F55	1	CROPB
F56	1	VETB
F57	1	NAPRALERT

-> file f2-f5, f7-f18

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

3.25

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FILE 'CAPLUS' ENTERED AT 00:54:49 ON 04 NOV 2008

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=> s rna?(3w)dependen?(3w)rna?(3w)polymeras?
L2 21057 RNA?(3W) DEPENDEN?(3W) RNA?(3W) POLYMERAS?

=> s l2(s)(gene?(3w)silen?)
1 FILES SEARCHED...
8 FILES SEARCHED...
12 FILES SEARCHED...
13 FILES SEARCHED...
L3 508 L2(S) (GENE?(3W) SILEN?)

=> s l3(s)crassa?
L4 77 L3(S) CRASSA?

=> dup rem l4
DUPLICATE IS NOT AVAILABLE IN 'USGENE'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L4
L5 34 DUF REM L4 (43 DUPLICATES REMOVED)

=> d ti l5 1-34

L5 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1
TI The RNA-dependent RNA polymerase
essential for post-transcriptional gene silencing in
Neurospora crassa interacts with replication protein A

L5 ANSWER 2 OF 34 USPATFULL on STN
TI RNA interference

L5 ANSWER 3 OF 34 USPATFULL on STN DUPLICATE 2

TI Composition for treatment of prevention of endometrial cancer and method of preventing or treating endometrial cancer using the composition

L5 ANSWER 4 OF 34 USPTAFULL on STN

TI Soluble rna polymerase protein and methods for the use thereof

L5 ANSWER 5 OF 34 USPTAFULL on STN

TI Methods and compositions for generating recombinant nucleic acid molecules

L5 ANSWER 6 OF 34 IFIPAT COPYRIGHT 2008 IFI on STN

TI Isolation and characterization of a *N. crassa* silencing gene and uses thereof; *Neurospora crassa* (*N. crassa*); nucleotide sequences; vectors and host cells; silencing gene has a RNA-dependent RNA polymerase domain; use to study gene silencing as it pertains to expression of transgenes

L5 ANSWER 7 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN

TI The structure of an RNAi polymerase links RNA silencing and transcription

L5 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN

TI Obtaining a stable gene silencing in eukaryotic cells by overexpression of RNA dependent RNA polymerase encoded by the qde-1 gene

L5 ANSWER 9 OF 34 USPTAFULL on STN

TI Methods and means for gene silencing in plants

L5 ANSWER 10 OF 34 USPTAFULL on STN

TI Compositions and methods for preparing short RNA molecules and other nucleic acids

L5 ANSWER 11 OF 34 USPTAFULL on STN

TI Methods and compositions for controlling efficacy of RNA silencing

L5 ANSWER 12 OF 34 USPTAFULL on STN

TI In vivo gene silencing by chemically modified and stable siRNA

L5 ANSWER 13 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN

TI The post-transcriptional gene silencing machinery functions independently of DNA methylation to repress a LINE1-like retrotransposon in *Neurospora crassa*

L5 ANSWER 14 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 3

TI RNA Silencing in *Aspergillus nidulans* Is Independent of RNA-Dependent RNA Polymerases

L5 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 4

TI Gene silencing pathway RNA-dependent RNA polymerase of *Neurospora crassa*: yeast expression and crystallization of selenomethionated QDE-1 protein

L5 ANSWER 16 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN

TI RNA Silencing in *Aspergillus nidulans* Is Independent of RNA-Dependent RNA Polymerases

L5 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN

TI Methods for post-transcriptional gene silencing using soluble *Neurospora crassa* RNA polymerase

L5 ANSWER 18 OF 34 USPATFULL on STN
 TI RNA interference

L5 ANSWER 19 OF 34 USPATFULL on STN
 TI Regulation of transcription elongation factors

L5 ANSWER 20 OF 34 USPATFULL on STN
 TI Continuous non-radioactive polymerase assay

L5 ANSWER 21 OF 34 USPATFULL on STN
 TI Methods and compositions for RNA interference

L5 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 5
 TI Redundancy of the two dicer genes in transgene-induced posttranscriptional gene silencing in *Neurospora crassa*

L5 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 6
 TI The RNA-dependent RNA polymerase, QDE-1, is a rate-limiting factor in post-transcriptional gene silencing in *Neurospora crassa*

L5 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
 TI RNA-dependent RNA polymerase in gene silencing

L5 ANSWER 25 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN
 TI Detection of unpaired DNA at meiosis results in RNA-mediated silencing

L5 ANSWER 26 OF 34 USPATFULL on STN
 TI Methods and compositions for RNA interference

L5 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 7
 TI Cellular RNA-dependent RNA polymerase involved in posttranscriptional gene silencing has two distinct activity modes

L5 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
 TI Quelling in *Neurospora crassa*

L5 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
 TI *Neurospora crassa* gene *qde-1* protein, its similarity to RNA-dependent RNA polymerase, involvement in post-transcriptional gene silencing induced by transgenes, and its DNA and amino acid sequences

L5 ANSWER 30 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 8
 TI An RNA-Dependent RNA Polymerase Gene in *Arabidopsis* Is Required for Posttranscriptional Gene Silencing Mediated by a Transgene but Not by a Virus

L5 ANSWER 31 OF 34 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 9
 TI *Arabidopsis* SGS2 and SGS3 Genes Are Required for Posttranscriptional Gene Silencing and Natural Virus Resistance

L5 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 10
 TI Gene silencing: RNA makes RNA makes no protein

L5 ANSWER 33 OF 34 Elsevier BIOBASE COPYRIGHT 2008 Elsevier Science B.V. on STN DUPLICATE
 TI Gene silencing: RNA makes RNA makes no protein

L5 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 12
 TI Gene silencing in *Neurospora crassa* requires

a protein homologous to RNA-dependent RNA
polymerase

-> d ibih abs 15 1 6 15 23 29 34

L5 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2008:161967 CAPLUS

DOCUMENT NUMBER: 148:348459

TITLE: The RNA-dependent RNA
polymerase essential for post-transcriptional
gene silencing in *Neurospora*
crassa interacts with replication protein A

AUTHOR(S): Nolan, Tony; Cecere, Germano; Mancone, Carmine;
Alonzi, Tonino; Tripodi, Marco; Catalanotto, Caterina;
Cogoni, Carlo

CORPORATE SOURCE: Dipartimento di Biotecnologie Cellulari ed Ematologia,
Universita La Sapienza, Rome, Italy

SOURCE: Nucleic Acids Research (2008), 36(2), 532-538

CODEN: NARHAD; ISSN: 0305-1048

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Post-transcriptional gene silencing (PTGS) pathways play a role in genome
defense and have been extensively studied, yet how repetitive elements in
the genome are identified is still unclear. It has been suggested that
they may produce aberrant transcripts (aRNA) that are converted by an
RNA-dependent RNA polymerase (RdRP) into double-stranded RNA (dsRNA), the
essential intermediate of PTGS. However, how RdRP enzymes recognize
aberrant transcripts remains a key question. Here we show that in
Neurospora crassa the RdRP QDE-1 interacts with Replication Protein A
(RPA), part of the DNA replication machinery. We show that both QDE-1 and
RPA are nuclear proteins and that QDE-1 is specifically recruited onto the
repetitive transgenic loci. We speculate that this localization of QDE-1
could allow the in situ production of dsRNA using transgenic nascent
transcripts as templates, as in other systems. Supporting a link between
the two proteins, we found that the accumulation of short interfering RNAs
(siRNAs), the hallmark of silencing, is dependent on an ongoing DNA
synthesis. The interaction between QDE-1 and RPA is important since it
should guide further studies aimed at understanding the specificity of the
RdRP and it provides for the first time a potential link between a PTGS
component and the DNA replication machinery.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 34 IPIPAT COPYRIGHT 2008 IFI on STN

AN 04359999 IPIPAT;IFIUDB;IPICDB

TITLE: Isolation and characterization of a *N. crassa*
silencing gene and uses thereof; *Neurospora*
crassa (*N. crassa*); nucleotide
sequences; vectors and host cells; silencing gene has
a RNA-dependent RNA
polymerase domain; use to study gene
silencing as it pertains to expression of
transgenes

INVENTOR(S): Carlo; Cogoni, Rome, IT

PATENT ASSIGNEE(S): Giuseppe; Macino, Rome, IT

PRIMARY EXAMINER: Universita degli Studi di Roma "La Sapienza", IT

AGENT: Qian, Celian

Gauthier & Connors LLP

NUMBER PK DATE

PATENT INFORMATION:	US 7001762	B1	20060221
	WO 2000050581		20000831
APPLICATION INFORMATION:	US 2000-913878		20000216
	WO 2000-IT48		20000216
			20020123 PCT 371 date
			20020123 PCT 102(e) date

EXPIRATION DATE: 16 Feb 2020

	NUMBER	DATE
PRIORITY APPLN. INFO.:	IT 1999-RM117	19990222
FAMILY INFORMATION:	US 7001762	20060221
DOCUMENT TYPE:	Utility	
	Granted Patent - Utility, no Pre-Grant Publication	
FILE SEGMENT:	CHEMICAL	
	GRANTED	
ENTRY DATE:	Entered STN: 22 Feb 2006	
	Last Updated on STN: 21 Aug 2006	

MICROFILM REEL NO: 012612 FRAME NO: 0048
 NUMBER OF CLAIMS: 7
 GRAPHICS INFORMATION: 5 Drawing Sheet(s), 5 Figure(s).
 DESCRIPTION OF FIGURES:

FIG. 1 shows the restoration of the al-1 expression in 107 insertional mutant strain. The total RNA has been extracted from mycelles collected after light induction over ten minutes from an al-1 silenced strain (6XW), a untransformed wild type strain (WT) and 107 mutant strain. For the hybridization an al-1 specific probe was used. In the lower part the restoration using an al-1 specific probe is showed.

FIG. 2 shows the genomic organization of the qde-1 gene. a) The two cosmids (56G11 and 40H7) able to complement the qde-1 mutants are represented. The white box in the 40H7 cosmid represents the sequences of the cosmid vector. A restriction map of 7,9 Kb qde-1 containing fragment obtained from 40H7 using EcoRI is showed: E(EcoRI), P(PstI), B(BgIII). The black box represents the ORF identified within EcoRI 7,9 Kb fragment. The pDX and pSX plasmids containing the DNA fragments subcloned in the XbaI (X) and EcoRI (E) sites are also showed. B) Southern analysis of the 107 and WT strains. The genomic DNA was digested using BglI and NaeI. In the lower diagram the DNA probe used for the hybridization and the expected BglI/NaeI(B/N) restriction fragments are reported. The triangle represents the integration site in the 107 strain which determines the disappearance of the 1,0 Kb restriction fragment.

FIG. 3 represents the expression of the qde-1 gene in the 107 insertional mutant strain, untransformed wild type (WT) strain and al-1 silenced strain (6XW). The total RNA was hybridized using a qde-1 specific probe. In the lower part the amount of gel loaded RNA is showed.

FIG. 4 represents the amino acid sequence deduced from the qde-1 gene. The underlining indicates the RdRP conserved domain as showed in the alignment of FIG. 5.

FIG. 5 represents a sequence alignment of the QDE-1 protein (SEQ ID No. 2) with other polypeptides from SwissProtein sequence database: ORF from Z488334 (elegl) C. elegans, ORF from Z98533 (pom) S. pombe, ORF from AF080120 (araB) A. thaliana and RNA-dependent RNA polymerase from Y104403 (RdRP) tomato. Identical residues are pointed out in black, whereas the conservative replacements are showed in gray.

AB A nucleotide sequence encoding for a protein characterized in that it has a silencing activity and comprises a RNA-dependent RNA polymerase domain is disclosed; furthermore expression vectors suitable for the expression of said sequence in bacteria, plants, animals and fungi are disclosed; the invention refers also to organisms transformed by such vectors.

CLMN 7

GI 5 Drawing Sheet(s), 5 Figure(s).

FIG. 1 shows the restoration of the *al-1* expression in 107 insertional mutant strain. The total RNA has been extracted from mycelles collected after light induction over ten minutes from an *al-1* silenced strain (6XW), a untransformed wild type strain (WT) and 107 mutant strain. For the hybridization an *al-1* specific probe was used. In the lower part the restoration using an *al-1* specific probe is showed.

FIG. 2 shows the genomic organization of the *qde-1* gene. a) The two cosmides (56G11 and 40H7) able to complement the *qde-1* mutants are represented. The white box in the 40H7 cosmid represents the sequences of the cosmid vector. A restriction map of 7,9 Kb *qde-1* containing fragment obtained from 40H7 using *EcoRI* is showed: E(*EcoRI*), P(*PstI*), B(*BglII*). The black box represents the ORF identified within *EcoRI* 7,9 Kb fragment. The pDX and pSX plasmids containing the DNA fragments subcloned in the *XbaI* (X) and *EcoRI* (E) sites are also showed. b) Southern analysis of the 107 and WT strains. The genomic DNA was digested using *BglII* and *NaeI*. In the lower diagram the DNA probe used for the hybridization and the expected *BglII/NaeI*(B/N) restriction fragments are reported. The triangle represents the integration site in the 107 strain which determines the disappearance of the 1,0 Kb restriction fragment.

FIG. 3 represents the expression of the *qde-1* gene in the 107 insertional mutant strain, untransformed wild type (WT) strain and *al-1* silenced strain (6XW). The total RNA was hybridized using a *qde-1* specific probe. In the lower part the amount of gel loaded RNA is showed.

FIG. 4 represents the amino acid sequence deduced from the *qde-1* gene. The underlining indicates the RdRP conserved domain as showed in the alignment of FIG. 5.

FIG. 5 represents a sequence alignment of the QDE-1 protein (SEQ ID No. 2) with other polypeptides from SwissProtein sequence database: ORF from Z488334 (eleg1) *C. elegans*, ORF from Z98533 (pom) *S. pombe*, ORF from AF080120 (araB) *A. thaliana* and RNA-dependent RNA polymerase from Y104403 (RdRP) tomato. Identical residues are pointed out in black, whereas the conservative replacements are showed in gray.

L5 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2008 ACS ON SYN DUPLICATE 4

ACCESSION NUMBER: 2005:3956 CAPLUS

DOCUMENT NUMBER: 143:224827

TITLE: Gene silencing pathway RNA
-dependent RNA polymerase

AUTHOR(S): of *Neurospora crassa*: yeast expression and
crystallization of selenomethionated QDE-1 protein
Laurila, Minni R. L.; Salgado, Paula S.; Makeyev,
Eugene V.; Nettelship, Joanne; Stuart, David I.;
Grimes, Jonathan M.; Bamford, Dennis H.

CORPORATE SOURCE: Institute of Biotechnology, Faculty of Biosciences,
Viikki Biocenter, University of Helsinki, Helsinki,
00014, Finland

SOURCE: Journal of Structural Biology (2005), 149(1), 111-115
CODEN: JSBIEM; ISSN: 1047-8477

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The RNA-dependent RNA polymerase, QDE-1, is a component of the RNA
silencing pathway in *Neurospora crassa*. The enzymically active
carboxy-terminal fragment QDE-1 AN has been expressed in
Saccharomyces cerevisiae in the presence and absence of selenomethionine
(SeMet). The level of SeMet incorporation was estimated by mass spectrometry
to be .apprx.98%. Both native and SeMet proteins were crystallized in space
group P21 with unit cell parameters $a = 101.2$, $b = 122.5$, $c = 114.4$ Å,
 $\beta = 108.9^\circ$, and 2 mols. per asym. unit. The native and SeMet
crystals diffract to 2.3 and 3.2 Å, resp.; the latter are suitable for
MAD structure determination

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 6
 ACCESSION NUMBER: 2004:343809 CAPLUS
 DOCUMENT NUMBER: 141:36069
 TITLE: The RNA-dependent RNA polymerase, QDE-1, is a rate-limiting factor in post-transcriptional gene silencing in *Neurospora crassa*
 AUTHOR(S): Forrest, Emma C.; Cogoni, Carlo; Macino, Giuseppe
 CORPORATE SOURCE: Sezione di Genetica Molecolare, Dipartimento di Biotecnologie Cellulari ed Ematologia, Istituto Pasteur e Fondazione Cenci Bolognietti, Università di Roma La Sapienza, Rome, 00161, Italy
 SOURCE: Nucleic Acids Research (2004), 32(7), 2123-2128
 CODEN: NARHAD; ISSN: 0305-1048
 PUBLISHER: Oxford University Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The RNA-dependent RNA polymerase (RdRP) qde-1 is an essential component of post-transcriptional gene silencing (PTGS), termed 'quelling' in the fungus *Neurospora crassa*. Here we show that the overexpression of QDE-1 results in a dramatic increase in the efficiency of quelling, with a concomitant net increase in the quantity of al-1 siRNAs. Moreover, in overexpressed strains there is a significant reduction in the number of transgenes required to induce quelling, and an increase in the phenotypic stability despite progressive loss of tandemly repeated transgenes, which normally detrs. reversion of a silenced phenotype to wild type. These data suggest that the activation and maintenance of silencing in *Neurospora* appear to rely both on the cellular amount of QDE-1 and the amount of transgenic copies producing RNA mols. that act as a substrate for the RdRP, implicating QDE-1 as a rate-limiting factor in PTGS.
 REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:608891 CAPLUS
 DOCUMENT NUMBER: 133:203848
 TITLE: *Neurospora crassa* gene qde-1 protein, its similarity to RNA-dependent RNA polymerase, involvement in post-transcriptional gene silencing induced by transgenes, and its DNA and amino acid sequences
 INVENTOR(S): Macino, Giuseppe; Cogoni, Carlo
 PATENT ASSIGNEE(S): Università Degli Studi Di Roma "La Sapienza", Italy
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050581	A2	20000831	WO 2000-IT48	20000216
WO 2000050581	A3	20001130		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL,

TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IT 1306014	B1	20010523	IT 1999-RM117	19990222
CA 2362203	A1	20000831	CA 2000-2362203	20000216
AU 2000031897	A	20000914	AU 2000-31897	20000216
AU 776057	B2	20040826		
EP 1155122	A1	20011121	EP 2000-909618	20000216
EP 1155122	B1	20060517		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI, CY

AT 326529	T	20060615	AT 2000-909618	20000216
US 7001762	B1	20060221	US 2002-913878	20020123

PRIORITY APPLN. INFO.: IT 1999-RM117 A 19990222
 WO 2000-IT48 W 20000216

AB The invention provides a protein encoded by *Neurospora crassa* gene *qde-1* (quelling-deficient 1) that contains a RNA-dependent RNA polymerase domain (residues 710 to 1282) and is involved in post-transcriptional gene silencing induced by transgenes. The invention also provides the DNA sequence of the *N. crassa* gene *qde-1*, as well as amino acid sequence of the gene *qde-1* protein. The invention further provides expression vectors containing a promoter and the *qde-1* gene (in a sense or anti-sense orientation), and organisms (such as prokaryote, plant, fungi or a non-human animal) transformed with said vectors. Still further, the invention provides a plant or non-human animal which contains a mutated *qde-1* gene, which results in reduced or inhibited silencing activity. Finally, the invention relates the use of gene *qde-1* DNA mols.: (1) in modulating gene silencing in plants, animals and fungi, and (2) to potentiate the antiviral-response in a plant.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 12

ACCESSION NUMBER: 1999:347271 CAPLUS
 DOCUMENT NUMBER: 131:127496
 TITLE: Gene silencing in *Neurospora crassa* requires a protein homologous to RNA-dependent RNA polymerase

AUTHOR(S): Cogoni, Carlo; Macino, Giuseppe
 CORPORATE SOURCE: Dipartimento di Biotecnologie Cellulari ed Ematologia, Sezione di Genetica Molecolare, Universita' di Roma La Sapienza, Rome, 00161, Italy

SOURCE: Nature (London) (1999), 399(6732), 166-169
 CODEN: NATUAS; ISSN: 0028-0836

PUBLISHER: Macmillan Magazines
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB In plants and fungi, the introduction of transgenes can lead to post-transcriptional gene silencing. This phenomenon, in which expression of the transgene and of endogenous genes containing sequences homologous to the transgene can be blocked, is involved in virus resistance and genome maintenance. Transgene-induced gene silencing has been termed quelling in *Neurospora crassa* and co-suppression in plants. Quelling-defective (*qde*) mutants of *N. crassa*, in which transgene-induced gene silencing is impaired, have been isolated. Here we report the cloning of *qde-1*, the first cellular component of the gene-silencing mechanism to be isolated, which defines a new gene family conserved among different species including plants, animals and fungi. The *qde-1* gene product is similar to an RNA-dependent RNA polymerase found in the tomato. The identification

of qde-1 strongly supports models that implicate an RNA-dependent RNA polymerase in the post-transcriptional gene-silencing mechanism. The presence of qde-1 homologues in a variety of species of plants and fungi indicates that a conserved gene-silencing mechanism may exist, which could have evolved to preserve genome integrity and to protect the genome against naturally occurring transposons and viruses.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 00:51:07 ON 04 NOV 2008)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOZ, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 00:51:52 ON 04 NOV 2008
SEA RNA? (3W) DEPENDEN? (3W) RNA? (3W) POLYMERAS?

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1   FILE ADISNEWS
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 2225 FILE USPATFULL
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L1 QUE RNA?(3W) DEPENDEN?(3W) RNA?(3W) POLYMERAS?

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FILE 'CAPLUS, USPATFULL, BIOSIS, MEDLINE, SCISEARCH, EMBASE, LIFESCI, ESBIOBASE, CABA, BIOTECHNO, TOXCENTER, PASCAL, USGENE, IFIPAT, AGRICOLA, USPAT2' ENTERED AT 00:54:49 ON 04 NOV 2008

L2 21057 SEA RNA?(3W) DEPENDEN?(3W) RNA?(3W) POLYMERAS?
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 L4 77 SEA L3(S) CRASSA?
 L5 34 DOP REM L4 (43 DUPLICATES REMOVED)
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 30 Oct 2008 (20081030/PD)

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HIGHEST GRANTED PATENT NUMBER: US7444682

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